



# Evaluation of Cardiac System of Care – Culture of Documentation

UND CRH Evaluation Team  
West Fargo, ND  
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Center *for*  
Rural Health

The University of North Dakota  
School of Medicine & Health Sciences

THE LEONA M. AND HARRY B.  
**HELMSLEY**  
CHARITABLE TRUST

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## Rural Healthcare Program

### LUCAS<sup>TM</sup>2 Chest Compression System Grants



# What We Collect

## Patient Outcomes

Rhythm changes

ROSC

Discharged alive

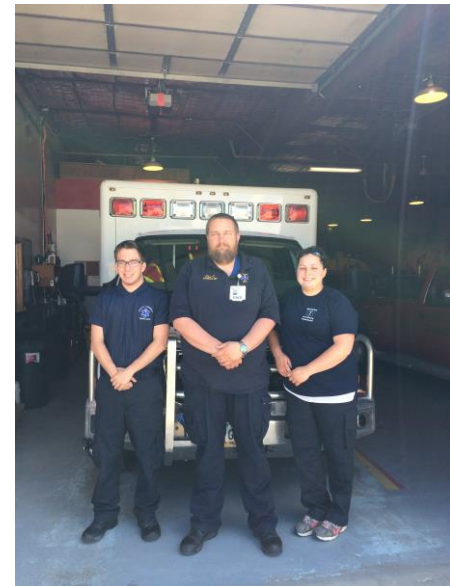


# What We Collect

## Provider Outcomes

Benefits of device during cardiac arrest care

- Assess patient
- Start IO/IV
- Give medications
- Address airway
- CPR in confined space
- CPR during transport



# How We Collect LUCAS<sup>®</sup> 2 Data

- 1) Calling providers who reported cardiac arrest event in state EMS database





# Change in Data Collection Strategy

- 1) Low response with cold calling
- 2) Issues with database



# Analysis of EMS Databases

- Only 1/3 of cardiac arrest events remained after applying quality control criteria

| Step | Quality Control Objective                               | Data | Percentage (%) |        |
|------|---|------|----------------|--------|
|      |   |      | Remove         | Remain |
| 1    | Cardiac arrest  | 1130 | 0              | 100    |
| 2    | Remove missing or invalid time intervals                | 648  | 43             | 57     |
| 3    | Remove missing or invalid distance and speed data       | 426  | 20             | 38     |
|      | Remove statistical outliers (three standard deviations) | 405  | 2              | 36     |
| 4    |   |      |                |        |



# Reasons for data deficiencies

- Lack of buy in
- Lack of practice
  - Volunteers
  - Call volumes
- Lack of training
- Software
- Fatigue/stress



# How We Collect LUCAS<sup>TM</sup>2 Data

- 2) **ATTENTION!** If you use this device  
Call the LUCAS evaluation team at:  
844-4LUCAS2  
LUCAS@med.und.edu



# After Sticker

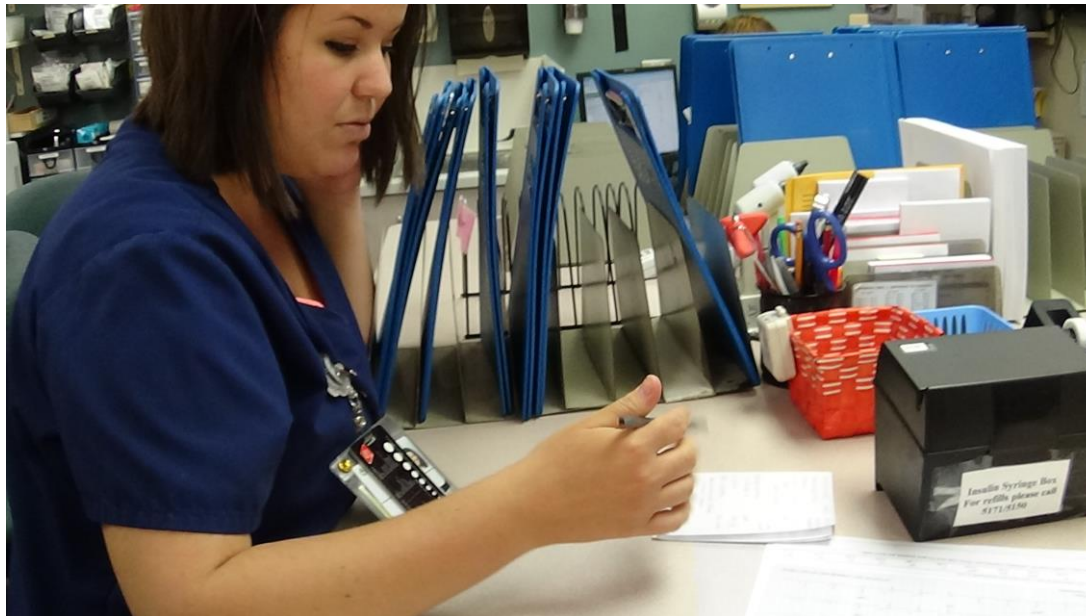
Initial spike in reporting:

- New providers calling us
  - 2 hospitals
  - 4 EMS services
- Old providers reporting more proactively



# Culture of Documentation

- Common understanding of the importance of reporting for system improvement
- Consistent, timely, accurate reporting



# Culture of Documentation

## - System Perspectives

- Leadership
  - Common understanding of purpose
  - Reinforce culture by encouraging reporting



# Culture of Documentation

## - System Perspectives

- Information technology
- Competent providers
- Feedback for quality improvement



# How to Create and Maintain a Culture of Documentation?





# THANK YOU!

[www.CRHeval.org](http://www.CRHeval.org)

[www.helmsleytrust.org](http://www.helmsleytrust.org)